COLNATEC
The Most Advanced Film Thickness Monitors

PRODUCT GUIDE

Optical Coatings

Problem
- Optical thin films such as MgF_2 and SiO_2 cause crystals to become excessively noisy and/or fail early, preventing completion of deposition run

Solution
- Heating crystals to 90°C allows extended crystal life by reducing stress, thus eliminating noise and crystal failure, often by as much as 500%
- Alloy quartz crystals significantly reduce film stress leading to low noise and long crystal life
- Temperature-controlling instrumentation

Recommended Products
- Alloy quartz crystals (standard or premium AT or the stress-resistant RC™)
- Oasis™ temperature-controlled sensor head
- Eon™ monitor with temperature control and compensation

Problem
- Multi-layer dielectrics consisting of 50 or more layers exceed the capacity of crystals due to excessive film buildup

Solution
- Heated sensor heads increase crystal life by 500% or more
- Temperature-controlling instrumentation

Recommended Products
- Oasis™ temperature-controlled sensor head
- Eon™ monitor

Problem
- Ultra thin film layers used in "needle" synthesis optical film manufacture are difficult to measure due to crystal rate shock upon opening of the source shutter
- When the shutter on the deposition source is opened, the crystal rate spikes then settles, causing the rate reading to be obscured

Solution
- Noise-resistant crystals are impervious to thermal shock (minimizing stress) and result in high accuracy
- Temperature-controlling instrumentation

Recommended Products
- RC™ quartz crystals
- Eon™ monitor

The key to perfect coatings.

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